

**ABSTRACT**

**CARRIER CONSTELLATION INFORMATION IN MULTI-CARRIER SYSTEMS**

In a multi-carrier system, the carriers ( $f_0 \dots f_{511}$ ,  $f_{512} \dots f_{1023}$ , ...,  $f_{3584} \dots f_{4095}$ )  
5 are grouped in subsets (SUBSET1; SUBSET2; ...; SUBSET8). A constellation  
information transmitting arrangement (BiGi\_TA), for instance located in the  
multi-carrier receiver (RX), produces for each carrier subset (SUBSET1;  
SUBSET2; ...; SUBSET8) a limited set of parameter values (B1, G1; B2, G2; ...;  
B8, G8) and transmits these sets of parameter values (B1, G1; B2, G2; ...; B8,  
10 G8) to a constellation information receiving arrangement (BiGi\_RA), for  
instance located in the multi-carrier transmitter (TX). Through interpolation of  
the limited set of parameter values (B1, G1; B2, G2; ...; B8, G8) the latter  
constellation information receiving arrangement (BiGi\_RA) determines the  
constellation where each carrier ( $f_0 \dots f_{511}$ ,  $f_{512} \dots f_{1023}$ , ...,  $f_{3584} \dots f_{4095}$ ) of a carrier  
15 subset (SUBSET1; SUBSET2; ...; SUBSET8) will be modulated with.

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